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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,629	04/12/2007	Peter Gaal	030263	9203
23696 7590 12/09/2008 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121				
EXAMINER				
ISSING, GREGORY C				
ART UNIT		PAPER NUMBER		
3662				
NOTIFICATION DATE		DELIVERY MODE		
12/09/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/554,629

Applicant(s)

GAAL ET AL.

Examiner

Gregory C. Issing

Art Unit

3662

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 17-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 34-38 is/are allowed.
- 6) ☒ Claim(s) 1-15 and 17-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 15 and 17-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification fails to sufficiently disclose "employing measured parameters of the first plurality of signals to perform . . . evaluate a validity of the obtained acquisition assistance data or calculate . . . updated, acquisition assistance data." Applicant is required to show where in the specification as originally filed this subject matter is taught. The addition of this claim language is considered new matter.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-15 and 17-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bloebaum et al (6,937,865) in view of King et al (6,211,819).
5. Bloebaum et al teach a position detection system for a mobile terminal 100 including (1) obtaining and storing acquisition assistance data in the form of, at least, almanac data (8:27+) but also Doppler and code phase (8:54+), (2) determining a desire for location, subsequent to the obtaining (8:40+), (3) evaluating the validity of the acquisition assistance data for satellites that may be visible as well as timeliness of the almanac data (8:65+), (4) use of the acquisition assistance data to acquire a plurality of signals from satellites or other position detection assisting

devices (7:59-64), (5) determination of position (9:23+), and update of the acquisition assistance data (9:28+) on the basis of the received signal information. The order of the events is exemplary and variations in the order in which steps are performed fall within the scope of Bloebaum et al (9:38+). The acquisition of signals from GPS satellites conventionally calculate an expected time of arrival, i.e. an expected code phase, which is used in the determination of pseudoranges in a well-known manner; since the acquisition is based on assistance data, it is obvious, if not inherent, that an expected code phase is utilized to acquire the signal from the satellite. However, King et al teach the conventionality of utilizing the acquisition aiding data to predict the possible range of code phases and Doppler shifts (10:46+). Moreover, Bloebaum et al also suggest the provision of code phase as acquisition aiding data. Additionally, Bloebaum et al disclose obtaining first acquisition assistance data while the mobile terminal is at a first location; at a subsequent time and location, if the assistance data is not valid, it is compensated by being updated with new assistance data. Bloebaum et al are directed to a mobile communication terminal in a communication network. The detection of movement by utilizing cell ID information transmitted by cell base stations is conventional and obvious. The detection of a current and former cell ID obviously indicates movement of the mobile terminal.

6. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Bloebaum et al by using the teachings of King et al to calculate an expected time of arrival, i.e. code phase, on the basis of obtained acquisition assistance data since the prior art teach the steps and the combination would yield a predictable result.

7. Applicant argues that the claims dependent upon claim 1 are patentable over the prior art and are novel because the prior art fails to teach "determining subsequently to a time of obtaining

... a need for the receiver to acquire a particular signal." The applicant's argument is not convincing. Firstly, Bloebaum et al describe the variation in order. Secondly, there is no way that the applicant can establish any distinction over the prior art for a step that is solely mental. There is nothing in the applicant's specification that discloses that this step is provided by anything/anyone other than the user making a determination of the desire to know location. When this mental step is performed fails to provide any distinction over a method since the applicant is incapable of determining when someone makes a mental decision. Applicant alleges distinction of the claimed subject matter of all the claims for this feature, however, this feature is only present in a single independent claim. Applicant alleges distinction over the prior art and patentability thereover since the assistance data is from a remote entity. The provision of acquisition assistance data is shown to be conventionally provided by a remote entity, see Bloebaum et al. Applicant's argument for patentability because acquisition assistance is provided from a "remote entity" is not persuasive particularly in view of the concept of acquisition aiding data, as in AGPS, which stated purpose is to aid a mobile terminal by providing data to the mobile terminal from a remote entity so as to reduce the time required for the mobile terminal to acquire satellite signals and thus reduce power consumption and time to first fix.

8. Claims 1-15 and 17-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mauro et al (6,856,282) in view of Nakajima (6,373,431) and Mann et al (6,757,610).

9. Mauro et al (6,856,282) disclose a method for a mobile terminal for acquiring signals for use in position determination. The mobile terminal 4 obtains acquisition assistance data 5 from a remote entity 10 wherein the assistance data may include time of week, ephemeris data, SVID,

clock behavior, system time, Doppler shifts etc (4:1-8). At a subsequent pointing time, the mobile terminal determines the need for a location determination and receives satellite signals. Next, the mobile terminal acquires the signals using the assistance data (5:52+) wherein a reference generator may select an initial time offset within the code sequence based on the assistance data. Mauro et al differ from the claimed subject matter since the acquisition aiding data is not described as being evaluated for validity.

10. Nakajima (6,373,431) teaches a receiver for receiving radio waves including storing acquisition assistance data in the form of ephemeris and clock correction data and determining the validity of the acquisition assistance data. Based on the determination, a user is alerted to use the previously obtained data or retrieve new assistance data before the expiration of the original assistance data. Thus, Nakajima is in the same field of endeavor as Mauro et al, acquisition aiding in a mobile terminal, and teaches the conventionality of evaluating the validity of acquisition assistance data.

11. Mann et al (6,757,610) teach a method for rapid location determination using parametric values obtained in a previous determination. The method includes obtaining parameter values which are stored in a non-volatile memory for subsequent "warm start". Upon successfully acquiring signals for location determining, the parameter values associated with that location acquisition are merged into a record of the location acquisition; the parameter values can include acquisition time, satellite Doppler, clock Doppler, receiver velocity, receiver location, clock error and signal strength (5:35-49). Thus, Mann et al are in the same field of endeavor as Mauro et al, acquisition assistance in a mobile terminal, and teach the conventionality of compensating/updating previous acquisition assistance data with new acquisition assistance data.

12. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Mauro et al by evaluating the validity of the assistance data as taught by Nakajima so as to yield the predictable result of assuring the use of up-to-date assistance data. Also, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Mauro et al by compensating previous assistance data in response to a change in position in view of the teachings of Mann et al so as to yield the predictable result of accurate assistance data. In light of the teachings in Mauro et al to integrate the positioning receiver with a wireless communication device using any of the conventional wireless communication networks, the mobile communication device inherently receives cell ID information from the servicing base station such that the change in the servicing base station obviously indicates a change in position.

13. Claims 24, 26, 31 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Carter (5,666,122).

Carter discloses a method for rapid signal acquisition in a satellite communication system including (1) obtaining acquisition assistance data while a mobile device (Figure 2) is at a first location in the form of storing ephemeris data in a memory 201 as well as a spatial position and turn-off time (3:27+), and (2) at a subsequent time and location, a difference between the turn-off time and the instant time is compared to estimate a change in location from the stored spatial position and thus estimate a new estimate of spatial position which is combined with the stored satellite ephemeris as well as used to limit parameter values of Doppler shift. This estimate of change and its use meets the scope of the claimed compensating the first acquisition data for the mobile device to aid a search at the subsequent location.

Applicant's allegation that Carter does not teach "obtaining acquisition assistance data" and "compensating the first acquisition assistance data" is mere conclusion without any bias or support. Thus, the applicant's argument fails to show how the prior art fails to teach the claimed invention.

14. Claims 34-38 are allowed.

The prior art fails to disclose the evaluation of validity of acquisition assistance data on the basis of a comparison of lists of base stations relevant to a mobile station at first and second times.

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

16. King et al (6,211,819) teach obtaining acquisition assistance data in the form of satellite position curve fit data and clock correction data from a remote station which transmits such information periodically (4:29+). Subsequently, the mobile terminal decides to determine a position and uses the acquisition assistance signals to acquire signals using restricted range of satellite Doppler and code phase search (4:64+) for use in determining position in a conventional manner of a GPS receiver (5:55+).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory C. Issing whose telephone number is (571)-272-6973. The examiner can normally be reached on Monday - Thursday 6:00 AM- 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (571)-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gregory C. Issing/
Primary Examiner
Art Unit 3662

gci